



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0257; Directorate Identifier 2014-NM-012-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This proposed AD was prompted by reports of fatigue cracking in certain areas. This proposed AD would require repetitive inspections for cracking of the skin assembly and bear strap of the forward airstair stowage doorway; post-repair and post-modification inspections for certain airplanes; and related investigative and corrective actions, if necessary. This proposed AD would also provide optional terminating actions for certain repetitive inspections. We are proposing this AD to detect and correct fatigue cracking, which could result in rapid loss of cabin pressure.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0257; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6450; fax: (425) 917-6590; email: alan.pohl@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0257; Directorate Identifier 2014-NM-012-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received reports of fatigue cracking in the skin assembly and bear strap at the aft lower corner of the forward airstair stowage doorway. The cracking was caused by fatigue from cyclic pressurization loading. At the time of crack detection, the airplanes had accumulated between 16,177 and 74,036 total flight cycles. This condition, if not corrected, could result in rapid loss of cabin pressure.

Related Rulemaking

AD 90-06-02, Amendment 39-6489 (Docket No. 89-NM-67-AD; 55 FR 8372, March 7, 1990), mandates certain structural modifications for Model 737-100, -200, -200C series airplanes. AD 98-11-04 R1, Amendment 39-10984 (64 FR 987, January 7, 1999); AD 2008-08-23, Amendment 39-15477 (73 FR 21237, April 21, 2008); and AD 2008-09-13, Amendment 39-15494 (73 FR 24164, May 2, 2008); are supplemental structural inspection (SSI) program ADs that contain

inspection requirements that are near or overlap the inspection areas that this proposed AD would require. The modification mandated by AD 90-06-02 and the inspections mandated by the exploratory SSI program ADs are not sufficient to address the unsafe condition identified in this proposed AD.

Relevant Service Information

We reviewed Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2014-0257.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between this Proposed AD and the Service Information." This proposed AD would also provide optional terminating actions for certain repetitive inspections.

The phrase "related investigative actions" is used in this proposed AD. "Related investigative actions" are follow-on actions that (1) are related to the primary actions, and (2) further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

The phrase "corrective actions" is used in this proposed AD. "Corrective actions" are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Differences Between this Proposed AD and the Service Information

The service information specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Costs of Compliance

We estimate that this proposed AD affects 132 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	5 work-hours X \$85 per hour = \$425 per inspection cycle	None	\$425 per inspection cycle	\$56,100 per inspection cycle

We have received no definitive data that would enable us to provide cost estimates for any on-condition actions specified in this proposed AD. We have no way of determining the number of aircraft that might need this repair.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2014-0257; Directorate Identifier 2014-NM-012-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category, as identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of fatigue cracking in the skin assembly and bear strap of the aft lower corner of the forward airstair stowage doorway. We are issuing this AD to detect and correct fatigue cracking, which could result in rapid loss of cabin pressure.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspections and Corrective Actions for Group 1 and Group 2 Airplanes that do not have a Certain Repair or Preventative Modification Installed

For Group 1 and Group 2 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, on which no repair or preventative modification has been done as specified in any of the service information identified in paragraphs (g)(1) through (g)(4) of this AD: At the applicable times specified in Table 1 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(1) of this AD, do high frequency eddy current and detailed inspections for cracking of the skin assembly and bear strap of the forward airstair stowage doorway, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(2) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections at the applicable times specified in Table 1 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, until the applicable terminating action specified in paragraph (m) of this AD is done.

- (1) Boeing Service Bulletin 737-53-1058, dated April 4, 1980.
- (2) Boeing Service Bulletin 737-53-1058, Revision 1, dated March 5, 1987.
- (3) Boeing Service Bulletin 737-53-1058, Revision 2, dated December 7, 1989.
- (4) Boeing Service Bulletin 737-53-1058, Revision 3, dated March 11, 1993.

(h) Inspections and Corrective Actions for Group 1 and Group 2 Airplanes that have a Certain Repair Installed

For Group 1 and Group 2 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, on which a repair has been installed as specified in Boeing Service Bulletin 737-53-1058, dated April 4, 1980: Within the applicable times specified in Table 1 of paragraph 1.E., “Compliance,” of Boeing

Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(1) of this AD, do a high frequency eddy current inspection for cracking of the bear strap of the forward airstair stowage doorway, and do low frequency eddy current and detailed inspections for cracking of the skin assembly and bear strap of the forward airstair stowage doorway; and do all applicable related investigative and corrective actions; in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(2) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections at the applicable times specified in Table 1 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, until the applicable terminating action specified in paragraph (m) of this AD is done.

(i) Inspections and Corrective Actions for Group 1 and Group 2 Airplanes that have a Certain Preventative Modification Installed

For Group 1 and Group 2 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, on which a preventative modification has been installed as specified in any of the service information identified in paragraphs (i)(1) through (i)(4) of this AD: Within the applicable times specified in Table 1 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(1) of this AD, do a high frequency eddy current inspection for cracking of the bear strap of the forward airstair stowage doorway, a low frequency eddy current inspection for cracking of the skin assembly and bear strap of the forward airstair stowage doorway, and detailed inspections for cracking of the skin assembly and bear strap of the forward airstair stowage doorway; and do all related investigative and applicable corrective actions; in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1058, Revision 4,

dated January 9, 2014, except as required by paragraph (o)(2) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections at the applicable times specified in Table 1 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, until the applicable terminating action specified in paragraph (m) of this AD is done.

- (1) Boeing Service Bulletin 737-53-1058, dated April 4, 1980.
- (2) Boeing Service Bulletin 737-53-1058, Revision 1, dated March 5, 1987.
- (3) Boeing Service Bulletin 737-53-1058, Revision 2, dated December 7, 1989.
- (4) Boeing Service Bulletin 737-53-1058, Revision 3, dated March 11, 1993.

(j) Inspections and Corrective Actions for Group 3 through Group 5 Airplanes

For Group 3 through Group 5 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014: At the applicable times specified in Table 2 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(1) of this AD, do a high frequency eddy current inspection for cracking of the bear strap of the forward airstair stowage doorway, a low frequency eddy current inspection for cracking of the skin assembly and bear strap of the forward airstair stowage doorway, and detailed inspections for cracking of the skin assembly and bear strap of the forward airstair stowage doorway; and do all related investigative and applicable corrective actions; in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(2) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections at the applicable times specified in Table 2 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, until the applicable terminating action specified in paragraph (m) of this AD is done.

(k) Inspections and Corrective Actions for Group 6 Airplanes

For Group 6 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014: Within 120 days after the effective date of this AD, inspect and repair any cracking using a method approved in accordance with the procedures specified in paragraph (q) of this AD.

(l) Post-Repair and Post-Modification Inspections for Group 1 and Group 2 Airplanes

For Group 1 and Group 2 airplanes on which any repair has been done as specified in any of the service information identified in paragraphs (l)(1) through (l)(3) of this AD, or on which any repair or modification has been done as specified in the service information identified in paragraph (l)(4) of this AD: At the applicable times specified in Table 3 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, except as required by paragraph (o)(1) of this AD, do a high frequency eddy current inspection for cracking in the bear strap and skin assembly and a general visual inspection for cracking in the frame of the forward airstair stowage doorway; or do low frequency eddy current inspections for cracking of the skin assembly and bear strap of the forward airstair stowage doorway; in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014. Options provided in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, for accomplishing the inspections are acceptable for compliance with the corresponding requirements of this paragraph provided that the inspections are done at the applicable times in paragraph 1.E., “Compliance,” of the Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014. If any cracking is found, before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (q) of this AD. Repeat the inspections at the applicable times specified in Table 3 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014.

- (1) Boeing Service Bulletin 737-53-1058, Revision 1, dated March 5, 1987.
- (2) Boeing Service Bulletin 737-53-1058, Revision 2, dated December 7, 1989.
- (3) Boeing Service Bulletin 737-53-1058, Revision 3, dated March 11, 1993.
- (4) Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014.

(m) Optional Terminating Actions

(1) For Group 1 and Group 2 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014: Accomplishment of a repair for cracking of the skin assembly and bear strap of the forward airstair stowage doorway before the effective date of this AD, using any service information specified in paragraphs (m)(1)(i) through (m)(1)(iv) of this AD, terminates the repetitive inspections required by paragraphs (g), (h), and (i) of this AD.

- (i) Boeing Service Bulletin 737-53-1058, Revision 1, dated March 5, 1987.
- (ii) Boeing Service Bulletin 737-53-1058, Revision 2, dated December 7, 1989.
- (iii) Boeing Service Bulletin 737-53-1058, Revision 3, dated March 11, 1993.
- (iv) Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014.

(2) For Group 1 and Group 2 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014: Accomplishment of a preventative modification for cracking of the skin assembly and bear strap of the forward airstair stowage doorway before the effective date of this AD, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, terminates the repetitive inspections required by paragraphs (g), (h), and (i) of this AD.

(3) For Group 3 through Group 5 airplanes identified in Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014: Repairing or modifying the forward airstair stowage doorway, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, terminates the repetitive inspections required by paragraph (j) of this AD.

(n) Credit for Previous Actions

This paragraph provides credit for the actions required by paragraphs (g), (h), and (i) of this AD, if those actions were performed before the effective date of this AD using any service information specified in paragraphs (n)(i) through (n)(iii) of this AD.

(i) Boeing Service Bulletin 737-53-1058, Revision 1, dated March 5, 1987.

(ii) Boeing Service Bulletin 737-53-1058, Revision 2, dated December 7, 1989.

(iii) Boeing Service Bulletin 737-53-1058, Revision 3, dated March 11, 1993.

(o) Exceptions to the Service Information

(1) Where Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, specifies a compliance time “after the Revision 4 date of this service bulletin,” this AD requires compliance within the specified compliance time “after the effective date of this AD.”

(2) Where Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, specifies to contact Boeing for repair instructions: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (q) of this AD.

(p) Post-Repair and Post-Modification Inspections for Group 3 through Group 5 Airplanes Not Required

The post-repair and post-modification inspections specified in Table 4 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, are not required by this AD.

Note 1 to paragraph (p) of this AD: The post-repair and post-modification inspections specified in Table 4 of paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1058, Revision 4, dated January 9, 2014, may be used in support of compliance with section 121.1109(c)(2) or 129.109(b)(2) of the Federal Aviation Regulations (14 CFR 121.1109(c)(2) or 14 CFR 129.109(b)(2)).

(q) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (r)(1) of this AD. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(r) Related Information

(1) For more information about this AD, contact Alan Pohl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6450; fax: (425) 917-6590; email: alan.pohl@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on April 25, 2014.

Jeffrey E. Duvon,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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